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Application Number		Not Known				
Filing Date		11/10/2003				
First Named Inventor		Silver et al.				
Group Art Unit		2624-				
Examiner Name		D. Mariam				
Attorney Docket Number		C97-050 CON7				
Sheet	1	of	3			

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
DM		3,069,654	DM	Hough et al. DM	12-18-1962	C973/36
↓		3,986,007		Ruoff, Jr.	10-12-1976	_____
		4,146,924		Birk et al.	03-27-1979	_____
		4,581,762		Lapidus et al.	04-08-1986	_____
		4,618,989		Tsukune et al.	10-21-1986	_____
		4,707,647		Coldren et al.	11-17-1987	_____
		4,972,359		Silver et al.	11-20-1990	_____
		5,245,674		Cass et al.	09-14-1993	_____
		5,343,390		Doi et al.	08-30-1994	_____
		5,351,310		Califano et al.	09-27-1994	_____
		5,515,453		Hennessey et al.	05-07-1996	_____
		5,694,482		Maali et al.	12-02-1997	_____
		5,703,960		Soest	12-30-1997	_____
	DM		5,828,769		Burns	10-27-1998

FOREIGN PATENT DOCUMENTS								
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Examiner Signature	/Daniel Mariam/	Date Considered	05/11/2006
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				Application Number	Not Known
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Sheet	2	of	3		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials ¹	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²	
DM		COGNEX CORPORATION, "Description Sobel Search," Natick, MA USA, 1998 but public before the above-referenced filing date.		
↓		COGNEX CORPORATION, "Chapter 7 CONLPAS," Cognex 3000/4000/5000 Programmable Vision Engines, Vision Tools, 1996, pp. 307-340, Revision 7.4 590-0136, Natick, MA USA		
↓		HU, YU HEN, "CORDIC-Based VLSI Architectures for Digital Signal Processing," IEE Signal Processing Magazine, July 1992, pp. 16-35, 1053-5888/92, USA		
↓		HU, et al, "Expanding the Range of Convergence of the CORDIC Algorithm," IEEE Transactions on computers, January 1991, pp. 13-21, Vol. 40, No. 1, USA		
↓		Ballard, D.H., "Generalizing the Hough Transform to Detect Arbitrary Shapes," Pattern Recognition, 1981, pp. 111-122, Vol. 13, No. 2, Pergaman Press Ltd., UK		
↓		LIN, et al., "On-Line CORDIC Algorithms," IEEE Transactions on Computers, pp. 1038-1052, Vol. 39, No. 8, USA	✓	
↓		WALLACK, AARON SAMUEL, "Chapter 4 Robust Algorithms for Object Localization," Algorithms and Techniques for Manufacturing, 1995, pp. 97-148 (and Bibliography pp. 324-335) PhD thesis, University of California at Berkeley, USA		
↓		JAMES D. FOLEY, ANDRIES VAN DAM, STEVEN K. FEINER, JOHN F. HUGHES, Second Edition in C, Introduction to Computer Graphics, pp. 36-49, Addison-Wesley Publishing Company, 1994, USA	✓	
↓		LISA GOTTESFELD BROWN, <u>A Survey of Image Registration Techniques</u> , Department of Computer Science, Columbia University, New York, NY 10027, ACM Computing Surveys, Vol. 24, No. 4, December 1992	✓	
DM		GUNILLA BORGEFORS, <u>Hierarchical Chamfer Matching: A Parametric Edge Matching Algorithm</u> , IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 10, No. 6, November 1988		

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		Attorney Docket Number	C97-050_CON7
Sheet	3	of	3

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
DM		DANIEL P. HUTTENLOCHER AND WILLIAM J. RUCKLIDGE, <u>A Multi-Resolution Technique for Comparing Images Using the Hausdorff Distance</u> , Department of Computer Science, Cornell University, Ithaca, NY 14853,	
↓		I.J. COX AND J.B. KRUSKAL (AT&T Bell Laboratories, Murray Hill, NJ), <u>On the Congruence of Noisy Images to Line Segment Models</u> , IEEE, 1988	
↓		DANIEL P. HUTTENLOCHER, GREGORY A. KLANDERMAN AND WILLIAM J. RUCKLIDGE, <u>Comparing Images Using the Hausdorff Distance</u> , IEEE Transaction on Pattern Analysis and Machine Intelligence, Vo. 15, No. 9, September 1993	
DM		AKINORI KAWAMURA, KOJI YURA, TATSUYA HAYAMA, YUTAKA HIDAI, TADATASHI MINAMIKAWA, AKIO TANAKA AND SHOICHI MASUDA, <u>On-line Recognition of Freely Handwritten Japanese Characters Using Directional Features Densities</u> , IEEE 1992	

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